CLAIMS

1. A process for the production of sulfur, obtained in pure form, also easily disposable at ambient temperature, starting from the hydrogen sulphide contained in natural gas, which includes:

a) oxidizing part of the hydrogen sulphide to sulfur dioxide;

b) dissolving in water the obtained sulfur dioxide in step (a);

c) carrying out the reaction (I):

$$2H_2S + SO_2 \rightarrow\rightarrow 3S + 2H_2O \quad (I)$$

making the remaining hydrogen sulphide to react with the solution prepared in step (b); and

d) using the thus obtained sulfur suspension for the production of sulfur or, alternatively, using it for the disposal of the sulfur itself in a site reserved for such purpose.

2. The process, according to claim 1, wherein the hydrogen sulphide is recovered from the natural gas by means of absorption with amines.

3. The process, according to claim 1 or 2, wherein the hydrogen sulphide has a concentra-

tion higher than 90%.

4. The process, according to claim 1, 2 or 3, wherein part of the stream containing hydrogen sulphide, between 5 and 35% of the total volume, is absorbed in solution of alcanolamine, desorbed and then oxidized to SO_2 and dissolved in water.

5. The process according to claim 1, wherein the hydrogen sulphide is oxidized to SO_2, by directly burning the mixture of methane and hydrogen sulphide as it exits from the extraction well, without pretreatment with alcanolamine, in presence of a substechiometric quantity of oxygen.

6. The process according to claim 5, wherein the oxidation is carried out in the presence of a catalyst consisting essentially of Nb_2O_5 and/or CeO_2 and/or MoO_3 supported onto TiO_2.

7. The process, according to claim 5, wherein the reaction mixture containing SO_2 is bubbled through a layer of water.

8. The process, according to claim 7, wherein the natural gas containing hydrogen sulphide is subsequently bubbled in the sulfur dioxide solution in water, obtaining the formation of a stable suspension of sulfur in water.

9. The process, according to any of the previous claims, wherein the reaction (I) takes place at a temperature equal to or lower than room temperature.

10. The process, according to any of the previous claims, wherein the thus obtained sulfur suspension is treated by ultrasounds, with the scope of disaggregating it, decreasing the dimension of its particles and increasing the stability in time of the thus obtained suspension of sulfur in water.

11. The process, according to any of the previous claims, wherein the suspension of sulfur in water is disposed in a geologic structure by means of injection in a porous matrix, even at ambient temperature or, in any case, at a temperature lower than the melting point of sulfur.

12. The process, according to any of the previous claims from 1 to 10, wherein the suspension of sulfur in water is disposed in a geologic structure, by means of injection in a fracture even at ambient temperature or, in any case, at a temperature lower than the melting point of sulfur.

13. The process, according to any of the claims

from 1 to 10, wherein the suspension of sulfur in water is disposed in a geologic structure by means of injection under hydraulic fracturing conditions, even at ambient temperature or, in any case, at a temperature lower than the melting point of sulfur.

14. Use of the sulphur produced according to claim 1-10 in the agricultural field.